

REMARKS

Claims 21-28 are pending in the subject application.

Applicants have canceled claims 1-20 and added claims 21-28. Support for claims 21-28 may be found in claims 1-9 as originally filed and at page 3, line 21 to page 5, line 9 in the specification as originally filed. No new matter has been introduced.

Applicants submit a petition for extension of 3-month time, request for continued examination, and petition to revive the application together with this response.

Applicants request favorable reconsideration of the subject application in view of the amendments and the following remarks.

Claim Rejections

The examiner's action dated December 7, 2007 rejected claims 1-20 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement; claims 1-20 were also rejected under 35 U.S.C. 112, second paragraph, as being indefinite; claims 1-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over CN 1,240,763 (CN'763); claims 1-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over CN 1,226,512 (CN'512) in view of CN'763.

In response, Applicants submit that claims 1-20 have been canceled by this amendment. Therefore, the rejections in the examiner's action are moot. Applicants have added claims 21-28 in the subject application and submit that claims 21-28 would overcome all the rejections and are patentable over the cited references.

Applicants submit that claim 21 is directed to a method for producing potassium chromate with potassium hydroxide. The subject invention as set forth in claim 21

differs from the cited art, because both CN'763 and CN'512 are directed to method for producing sodium chromate with sodium hydroxide. Neither Chinese patents concern or disclose a method for producing potassium chromate with potassium hydroxide.

Applicants further submit that even though potassium and sodium are both alkali metal, the claimed invention as set forth in claim 21 differs from the method in both Cn'763 and CN'512 and has shown the following advantages by the use of potassium hydroxide to produce potassium chromate:

First, the temperature for decomposition of chromate ore is at 200-450°C. By using potassium hydroxide, the range of operating temperature is widened, and the operating temperature is lowered a lot in comparison with the operating temperature of 500-600°C when using sodium hydroxide as in the cited art. As a result, the low energy consumption, mild reaction conditions, and strong industrial operability are achieved. Therefore, the claimed invention as set forth in claim 21 is patentable over the cited patents.

Second, the chromium content of the ferrous residue in the claimed invention is decreased to below 0.5% by weight, and the recovery rate of chromium approaches 100%, 10 to 20% higher than that of the current industrial method. Therefore, the resource utilization efficiency of the chromium ore is increased.

Third, pure chromate crystal is manufactured by purifying the primary chromate product as set forth in claim 22. Both the primary chromate product and the pure chromate crystal are used as the raw materials to manufacture other chromium compounds.

Fourth, no auxiliaries are added in the claimed method and the amount of discharged residues is reduced from the source. The amount of the ferrous residue produced is only 0.6 tonnes with the production of 1.0 tonne of products, only a quarter of the amount of discharged residue in the soda-ash roasting method. Furthermore, no dust or waste gas is produced. The environmental pollution is therefore significantly reduced.

Fifth, almost no chromium is contained in the ferrous residue obtained in this invention. The ferrous residue is an evenly mixed powder enriched only with iron and magnesium. It can be used as the iron-series raw materials in steel or cement industry after the extraction of magnesium. The disposal problem of the ferrous residue is resolved and the environmental pollution of the ferrous residue is eliminated as well.

Sixth, the alkali metal hydroxide used in the claimed invention to decompose chromite ore can be separated and recycled, greatly reducing the chemical consumption of the alkali raw materials and significantly decreasing the cost of raw materials.

In view of the foregoing, claim 21 is patentable over the cited art. Since claims 22-28 depend on claim 21, they are also patentable over the cited art.

In view of the foregoing, Applicants believe that all rejections have been overcome and claims 21-28 are in condition for allowance.

A three-month extension fee of \$555, request fee of \$405 for the RCE, and petition to revive fee of \$810 are required for the response. Please charge the required fees and any other fee that the Office deems required to Deposit Account No. 50-2586 and notify Applicants' attorney.

Respectfully submitted,

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